

Application Number 10/565,395
Amendment Dated December 16, 2009
Reply to Office Action of September 16, 2009

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Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-7. (canceled)

8. (currently amended) A puncturing device comprising:

 a housing, wherein the housing defines a breaking edge;

 a puncturing needle disposed in the housing, wherein the puncturing needle has breakable wings that rest against the breaking edge of the housing, and at least one side jut;

 a push button disposed in the housing, wherein the push button has arms to guide the push button inside the housing;

 at least one return spring, wherein each of the at least one return spring is connected to an arm of the arms, and wherein the at least one return spring has a contact portion that contacts the at least one side jut; and

 a driving spring having a first end and a second end, wherein the first end is linked to the push button and the second end drives the puncturing needle in a driving direction parallel to a longitudinal axis defined by the puncturing needle,

 wherein the entirety of the at least one side jut of the puncturing needle is disposed inside the housing longitudinally between the contact portion of the at least one return spring and the second end of the driving spring before, during, and after use of the puncturing device, such that the contact portion of the at least one return spring, the entirety of the at least one side jut, and the driving spring are disposed in non-overlapping series along the longitudinal axis before, during, and after use of the puncturing device, and

 wherein the at least one return spring acts against the at least one side jut in a direction generally opposite to the driving direction.

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9. (currently amended) The puncturing device according to the claim 4 8, wherein the at least one spring comprises two return springs, each of which is connected to an arm of the arms, and wherein the at least one side jut comprises two side juts, each of which is positioned inside the device longitudinally between the contact portions of the two return springs and the second end of the driving spring before, during, and after use of the puncturing device, such that the two return springs, the two side juts, and the driving spring are disposed in series along the longitudinal axis before, during, and after use of the puncturing device.

10. (currently amended) The puncturing device according to the claim 9, wherein the two side juts each comprise an elongate member that extends perpendicularly to the longitudinal axis and defines a first jut surface facing the driving spring, a second jut surface opposite to the first surface, and a distal edge,

wherein the two return springs are connected approximately perpendicularly to the lower portions of the arms of the push button,

wherein each of the two return springs comprises a flat member defining a plane, and

wherein the flat member extends toward the puncturing needle such that the plane of the flat member is generally perpendicular to and generally radial to the longitudinal axis,

wherein the flat member defines a first return spring surface facing the second jut surface and a second return spring surface opposite to the first return spring surface,

wherein the first return spring surface and the second jut surface remain facing each other before, during, and after use of the puncturing device, and

wherein the first return spring surface contacts the second jut surface to move the puncturing needle in a direction opposite to the driving direction and parallel to the longitudinal axis.

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11. (previously presented) The puncturing device according to the claim 8, wherein the first end of the driving spring is integrally connected to an inside face of the push button.

12. (previously presented) The puncturing device according to the claim 8, wherein the second end of the driving spring comprises a pusher that pushes the puncturing needle.

13. (currently amended) The puncturing device according to claim 12, wherein the puncturing needle and the pusher are separate structures, wherein the pusher contacts the puncturing needle during operation of the puncturing device, and separates from discontinues contact with the puncturing needle after use such that the pusher becomes discontinuous with the puncturing needle after use.

14. (previously presented) The puncturing device according to claim 12, wherein the pusher has a cup-shaped end and wherein the puncturing needle has a projection that fits within the cup-shaped end of the pusher.

15. (previously presented) The puncturing device according to the claim 8, wherein the driving spring is shaped like the letter "S".

16. (previously presented) The puncturing device according to the claim 8, wherein the return springs are flat springs.

17. (currently amended) The puncturing device according to claim 8, wherein a first force applied to the push button compresses the driving spring between the push button and the puncturing needle and presses the breakable wings against the breaking edge until the breakable wings break,

wherein, upon breaking the breakable wings, the driving spring drives the puncturing needle such that a lancet of the puncturing needle extends outside the housing and the at least one side jut contacts the at least one return spring, and

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wherein, after the lancet extends outside the housing, the at least one return spring applies a second force to the at least one side jut in a direction generally parallel to the longitudinal axis and opposite to the first force to pull the lancet of the puncturing needle inside the housing.

18. (previously presented) The puncturing device according to claim 17, wherein after pulling the lancet of the puncturing needle inside the housing, the at least one return spring and the driving spring are in a free state.

19. (previously presented) The puncturing device according to claim 8, wherein the arms are integral to the push button before, during, and after use of the puncturing device.

20. (currently amended) The puncturing device according to claim 8, wherein each of the arms of the push button defines a detent contained within the housing, wherein the detent contacts an interior portion of the housing to prevent removal of ~~to fix~~ the push button ~~in from~~ the housing, and wherein the each of the at least one return spring is connected to the detent of the arm.

21. (previously presented) The puncturing device according to claim 8, wherein the puncturing needle has a first end driven by the driving spring and a second end comprising a puncturing portion, wherein the at least one side jut is disposed on the puncturing needle proximate to the first end of the puncturing needle and proximate to the second end of the driving spring.

22. (previously presented) The puncturing device according to claim 8, wherein the puncturing needle has a first end driven by the driving spring and a second end comprising a puncturing portion, wherein the at least one side jut is disposed on the puncturing needle closer to the first end of the puncturing needle than the second end of the puncturing needle, and wherein the breakable wings are disposed on the puncturing

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needle closer to the second end of the puncturing needle than the first end of the puncturing needle.

23. (currently amended) The puncturing device according to claim 8, wherein the at least one return spring acts against the at least one side jut in a direction generally parallel to the longitudinal axis and opposite to the driving direction after a lancet of the puncturing needle extends outside the housing, to pull the lancet in a direction opposite the driving direction along the longitudinal axis and back inside the housing.

24. (new) A puncturing device comprising:

- a housing, wherein the housing defines a breaking edge;
- a puncturing needle disposed in the housing, wherein the puncturing needle has an upper pushing end and a lower puncturing end, wherein the puncturing needle defines a longitudinal axis along which the puncturing needle travels, and wherein the puncturing needle comprises:
 - an elongated body extending longitudinally;
 - a breakable wing protruding from the body in a direction perpendicular to the longitudinal axis, wherein the breakable wing rests against the breaking edge of the housing before use of the puncturing device, and
 - a jut member protruding from the body in the direction perpendicular to the longitudinal axis,
- wherein the breakable wing is disposed closer to the puncturing end than the jut member, and
- wherein the jut member defines a lower contact face facing the puncturing end of the needle and an upper face opposite to the lower contact face;
- a push button disposed in the housing, the push button comprising:
 - a button face extending in a direction perpendicular to the longitudinal axis and disposed over the upper pushing end of the puncturing needle,
 - an arm extending from the button face in a direction toward the lower puncturing end of the puncturing needle and parallel to the longitudinal

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axis, wherein the arm guides movement of the push button within the housing, and

a return spring connected to the arm, the return spring defining an upper contact surface that contacts the lower contact face of the jut member;
and

a driving spring disposed between the button face of the push button and the pushing end of the puncturing needle, wherein the driving spring is discontinuous with the puncturing needle, and

wherein before, during, and after use of the puncturing device, the lower contact surface of the jut member faces the upper contact surface of the return spring.

25. (new) The puncturing device of claim 24, wherein during use of the puncturing device, the driving spring and the puncturing needle separate from each other such that a gap exists between the driving spring and the puncturing needle.